

activity performed on the client device, the combining reducing resources of the client device consumed by the combined activities.

46. (New) The method of claim 45, wherein the combined activities are disk activities.

REMARKS

Claims 1-12, 15-27, 30-41, 43 and 44 were pending. In an Office Action dated May 12, 2011, claims 1-12, 15-27, and 30-41, 43 and 44 were rejected. Applicants have amended claims 1, 3, 17, 19 and 44 in this amendment. New claims 45 and 46 are added. Support for the new claims is found in paragraph [0063] of the application as filed.

Claims 1-12, 15-27, 30-41, and 43-46 are pending upon entry of this amendment. Applicants thank the Examiner for examination of the claims pending in this application and address the Examiner's comments below.

Interview Summary

Applicants' representative conducted a telephone interview with Examiner Scott Sciacca on August 4, 2011 to discuss this amendment. Applicants thank the Examiner for his time and remarks. During the telephone interview, Applicants' representative and the Examiner discussed the distinctions between the claimed invention and the Culbert reference. No specific agreement was reached during the interview.

Response to Rejection Under 35 USC 103(a)

The Examiner rejected claims 1-15, 17-30, 32-41 and 43 under 35 U.S.C. § 103(a) as being unpatentable over Hasink et al. (U.S. Publication No. 2005/0149932) in view of Culbert et al. (U.S. Patent No. 5,838,968) and Foote (U.S. Patent No. 7,028,298). Applicant respectfully traverses this rejection as applied to the amended claims.

Independent claim 1, as amended recites:

receiving, by an application executed by an operating system, a plurality of operating parameters having values describing a plurality of different types of resources of a client device;
determining a value representing a performance measure of the client device based at least in part on a combination of the plurality of operating parameter values describing the plurality of different types of resources of the client device;
assigning the value representing the performance measure to a usage variable, **wherein the usage variable value defines a current usage of a particular combination of resources of the client device**; and
correlating by the application a resource usage level of the application with the usage variable, the correlating comprising:
 examining a representation of a mapping of usage variable values to resource usage levels, wherein each tuple in the mapping specifies a particular value of the usage variable and a particular resource usage level;
 identifying a tuple of the mapping for which the particular value of the usage variable matches the value assigned to the usage variable; and
 the application modifying its own execution to use the particular resource usage level specified by the identified tuple.

Examiner cited Culbert as disclosing the limitation “examining a representation of a mapping of usage variable values to resource usage levels, wherein each tuple in the mapping specifies a particular value of the usage variable and a particular resource usage level.” However the cited portions of Culbert do not disclose this limitation. Culbert discloses “dynamic resource management across tasks in real-time operating systems” using a “task resource utilization vector” (Culbert Abstract.) Each task resource utilization vector contains task resource

utilization records that contain “quantities of system resources that each task qualitatively prefers to utilize while executing on the processor” and a “run level that reflects the associated task’s ability to perform its work when allocated the resources according to the particular task resource utilization record” (*Id.*) A task resource utilization record as disclosed in Culbert is distinct from a tuple in “a representation of a mapping of usage variable values to resource usage levels” as claimed. Specifically, the components of a task resource utilization record, i.e., quantities of system resources that a task prefers to utilize and the run level that reflects a task’s ability to perform its work are distinct from the “the usage variable value [that] defines **a current usage of a particular combination of resources of the client device**” represented in the tuple as claimed. Therefore, the cited portions of Culbert do not disclose the limitation “examining a representation of a mapping of usage variable values to resource usage levels, wherein each tuple in the mapping specifies a particular value of the usage variable and a particular resource usage level.”

The Foote reference discloses “a plurality of memory usage limits of thresholds” for “CPU usage, network usage, socket usage, file usage, and monitor usage” (Foote, column 4, lines 31-67.) Examiner cites these portions of Foote as disclosing a usage variable that defines “a plurality of usage thresholds for a particular combination of resources of the client device.” However, a plurality of memory usage limits of thresholds for CPU usage, network usage, socket usage, file usage, and monitor usage is distinct from “**a current usage of a particular combination of resources of the client device**” as claimed. Therefore, the cited portions of Foote also do not disclose the limitation “examining a representation of a mapping of usage variable values to resource usage levels, wherein each tuple in the mapping specifies a particular value of the usage variable and a particular resource usage level.” Since the cited portions of the

references Culbert, Foote, and Hasink do not teach the above limitation, the applicant respectfully submits that the claim is allowable.

Independent claim 17 and 44 recite limitations similar to claim 1 and overcome the present rejection for at least the same reasons. The dependent claims incorporate the limitations of the respective independent claims in addition to their own limitations and overcome the present rejection for at least the same reasons. For example, dependent claim 3 recites “wherein the application modifying its own execution comprises the application performing an activity affecting the usage variable **within a threshold time** of the usage variable indicating that the client device is performing an existing activity.” Examiner cites Hasink, paragraph [0031] as disclosing the limitations of claim 3 before amendment. The cited portion of Hasink discloses a background process using “idle cycles for a certain accumulated amount of time ... to perform disk intensive operations.” The background process checks the “current disk queue length” counter and if “the counter value is non-zero, or greater than a designated threshold, the background process waits a designated amount of time, such as 10 milliseconds, before checking again” (Hasink, paragraph [0031].) This is distinct from the claimed limitation “the application performing an activity affecting the usage variable **within a threshold time** of the usage variable indicating that the client device is performing an existing activity.” Therefore, the limitation of claim 3 is distinct from the cited portions of the references and claim 3 is allowable at least for these reasons.

Conclusion

For the above reasons, Applicants respectfully submit that the pending claims, as amended, are not taught by the art of record, and request allowance of the application. The

Examiner is invited to contact the undersigned by telephone to advance the prosecution of this application.

Respectfully Submitted,

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